

Cyrtandra megistocalyx (Gesneriaceae), a New Species from Oahu,
Hawaiian Islands

Hawaiian Plant Studies 28

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ONE'S WORK seems never done. Though in 1966 the writer published (Bishop Museum, Bull. 229) a monographic account of twenty-five years of study of *Cyrtandra*, he now presents, as a supplement, one more species from the island of Oahu, Hawaiian Islands.

Cyrtandra megistocalyx sp. nov. (Sect. *Cylindrocalyces*)

Fig. 1

DIAGNOSIS HOLOTYPI: Frutex 2 m alta, caule 2 cm diametro, ramulis glabratibus viridibus tum brunneis quadrangularibus teretibus in siccо contractis, cicatricibus separatis 2.5–3 mm altis scutelliformibus stramineis suberosis, cicatricibus fascium 5, novellis subadpressiter brunnei-pilosis, ramulis foliosis 2–4 mm diametro subteretibus cito glabratibus, internodis 5–25 mm plerumque 15 mm longis, foliis oppositis non aggregatis adscendentibus sed vetustioribus paucis divergentibus inaequalibus in 5–10 nodis superis affixis, folio uno paris cuiusque 1/8–1/2 minori, petiolis 15–36 mm longis gracilibus in juvente adpressiter brunnei-pilosis sed tum glabratibus, laminis 5–20 cm longis 14–45 mm latis chartaceis oblanceolatis cuneatis decurrentibus in apice subito subacuminatis supra glabris et obscure lucidis viridibus infra in midnervo adpresso brunnei-pilosulis et in nervis lateralibus minime pilosulis parte 3/4 ultima remote crenatisserrata, nervis lateralibus 8–17 in quoque latere rectis adscendentibus tum proxima marginem interconnectis et ramulis in seris salientibus, cymis 1-floriferis sparse brunnei-pilosis ex axilibus foliosis, pedunculis 2–3 mm longis et in flore divergentibus, pedicelis in flore 2–6 mm longis in fructu 7–14 mm longis sparse brunnei-pilosis, bracteis duobus caducis 2.5–3 mm longis lanceolatis subadpressiter brunnei-pilosis densiter ad marginem sparsiter in dorso, alabastris 26–27 mm longis in vivo extra remotissime brunnei-pilosis intra densiter adpresso brunnei-pilosis fusiformibus corpore oblanceoloideo rostro 8–10 mm longo adscendenti arcuati vel subsigmoideo, lobis 5 subconnatis sed in apice labia supera cum 3 papillis et labia infera cum 2 papillis brevissimis, corpore et parte infera rostri in flore in sinu 10 mm longo apertis et ex eo flore exerto, calycibus 25–27 mm longis et a fructu

immature caducis, corollis 28 mm longis in vivo albis extra glabris tubo 20 mm longo sed in fauce capitati-glandulosi-puberulento cuneati-cylindrico in parte media in 40° deflecto in basi 3 mm diametro in medio 5 mm diametro in fauce 8 mm diametro et 5 mm lato, limbo bilabiato, labia supera in 80° ab axile deflecto, lobis binis 6 mm longis 7 mm latis suborbicularibus intra in parte 1/2 infera capitati-glandulosi-puberulentis, labia infera 3-lobata lobis binis lateralibus 8 mm longis 8.5 mm latis oblongi-suborbicularibus simulantे puberulentibus, loba infera 9 mm longa 8.5 mm lata latiter elliptica pagina supera supra capitati-glandulosa excepta ad apicem et infra, staminibus binis inferis perfectis filamentis in tubo 4 mm ex basi adnatis parte libera 2.5 mm longa valide spiraliter curvata, antheris 3.5 mm longis conniventibus oblique et asymmetrico lati-ovatis, connectivo simulanti, staminodiis binis lateralibus in tubo 6 mm ex basi adnatis parte libera 0.3 mm longis antheroideo 0.7 mm longo translucenti, staminodeo supero simulanti sed in tubo in 5.3 mm adnato, stylo 9.5 mm longo tereti glabro, stigmate cum lobis binis 3.5 mm longis 2.5 mm latis ellipticis in latere 2/3 connatis, ovario 7 mm longo linear-lanceoloideo glabro basi cum disco cupulato 1.8 mm alto cincto, baccā 15 mm longa 9 mm diametro ellipsoidea alba rostrata (baccā immatura 23 × 8 mm), seminibus 0.4–0.5 mm longis 0.23–0.25 mm diametro ellipsoideis mellaceis sed apicibus umbo natis brunneis corpore cum reticulis cellulosis polygonatis elongatis 1/3 tam longis quam semine.

DIAGNOSIS OF HOLOTYPE: Shrub 2 m tall; stem 2 cm in diameter; branchlets glabrate, green to brownish, quadrangular terete, shrinking on drying; leaf scars separate 2.5–3 mm high, shield-shaped, stramineous, corky; bundle scars 5; young shoots covered with subappressed brown pilosity; leafy branchlets 2–4 mm in diameter, nearly terete, quickly glabrate; internodes 5–25 mm, mostly about 15 mm long; leaves opposite, not crowded, ascending, but a few older ones diverging, unequal, one of each pair being 1/8–1/2 the smaller, borne at the 5–10 upper nodes; petioles slender, 15–36 mm long, in youth appressed brown pilose but later glabrate; blades 5–20 cm long, 14–45 mm wide, chartaceous, oblanceolate and cuneate decurrent at base, the apex abruptly subacute, above

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FIG. 1. *Cyrtandra megistocalyx* St. John, from holotype. *a*, Habit, $\times \frac{1}{2}$; *b*, bud, $\times 1$; *c*, *d*, flower, $\times 1$; *e*, pistil, $\times 2$; *f*, fruit, $\times 1$; *g*, apex of calyx, $\times 4$.

glabrous and dark shiny green, below finely appressed brown pilosulous on the midrib and slightly so on the lateral veins, the outer three-quarters coarsely remotely crenate serrate, the lateral veins 8–17 on a side, straight, ascending, then near the margin the tips inarching and branches salient in the serra; cymes 1-flowered, from the leafy axils, sparsely brown pilose; peduncle 2–3 mm long, diverging in flower; pedicels 2–6 mm long in flower, 7–14 mm long in fruit, sparsely brown pilose; the paired bracts of the pedicel 2.5–3 mm long, caducous, lanceolate, brown subappressed pilose, sparsely so on the back, densely so near the margins; buds 26–27 mm long when fresh, without very remotely brown pilose, within closely appressed brown pilose, fusiform, but the body oblanceoloid, the beak 8–10 mm long, ascending and arcuate or subsigmoid, the 5 lobes almost completely fused, but at apex of the upper lip there are 3 minute tips like rounded nipples, and 2 shorter ones of the lower lip, the body and lower part of the beak at anthesis opening by a distal slit 10 mm long, through which the corolla protrudes; calyx 25–27 mm long, caducous from the young developing fruit; corolla 28 mm long when fresh, white, glabrous without, the tube 20 mm long, glabrous except for the throat which is capitate glandular puberulent, cuneate-cylindric, but at mid-point deflected at 40° from the axis of the lower tube, at base 3 mm in diameter, at the middle 5 mm, at the throat 8 mm high and 5 mm wide, limb 2-lipped, 5-lobed, upper lip spreading at 80° to the axis of the throat, the two lobes 6 mm long, 7 mm wide, suborbicular, within capitate glandular puberulent on lower half; lower lip 3-lobed; the two lateral lobes 8 mm long, 8.5 mm wide, oblong suborbicular, with similar glandular puberulence; lower lobe 9 mm long, 8.5 mm wide, broadly elliptic, the upper surface capitate glandular except near the tip and below; the two lower stamens perfect, their filaments adnate to the corolla tube to within 4 mm of the throat, the free portion 2.5 mm long, stout, spirally upcurved; the two perfect anthers 3.5 mm long, connivent, obliquely and asymmetrically broad ovate, the connective similar

in shape; the two lateral staminodia adnate to the corolla to within 6 mm of the throat, the free filament tips 0.3 mm long, bearing an antheroid tip 0.7 mm long, translucent; the upper staminodium similar but attached 0.7 mm lower down on the corolla tube; style 9.5 mm long, terete, glabrous; the two stigmatic lobes 3.5 mm long, 2.5 mm wide, elliptic, connate $\frac{2}{5}$ way up the proximal side; ovary 7 mm long, linear lanceoloid, glabrous, the base surrounded by a cupulate disk 1.8 mm high; berry (a ripe one) 15 mm long, 9 mm in diameter, ellipsoid, white, rostrate by the base of the style (one immature berry is larger, 23 × 8 mm); seeds 0.4–0.5 mm long, 0.23–0.25 mm in diameter, ellipsoid, honey-colored but the umboonate ends brown, the body covered with elongate polygonal cellular reticulations $\frac{1}{5}$ as long as the seed.

HOLOTYPE: Hawaiian Islands, Oahu, Kahanana, Waiahole Ditch Trail, Gulch no. 17, moist wooded gulch among *Metrosideros*, rare, 800 ft alt., May 2, 1954, H. St. John 25,297 (BISH).

DISCUSSION: *C. megistocalyx* is a member of the section *Cylindrocalyces*, as is its closest relative, *C. paludosa* Gaud. var. *paludosa*, a plant with the cymes 1–7-flowered; peduncles 3–14 mm long; pedicels 6–21 mm long; bracts 3–8 mm long; calyx 10–20 mm long at anthesis, splitting into 2 lips and 5 lobes 2–10 mm long; corolla tube glabrous; anthers 2 mm long, the connective asymmetrically broad ovate; style 6–8.5 mm long; and the stigmatic lobes 3 mm long. *C. megistocalyx* has the cymes 1-flowered; peduncles 2–3 mm long; pedicels 2–6 mm long in flower; bracts 2.5–3 mm long; calyx 25–27 mm long at anthesis permanently united and the 5 lobes represented only by minute nipple-like tips; corolla tube capitate glandular puberulent in the throat; anthers 3.5 mm long, the connective circular; style 9 mm long; and the stigmatic lobes 3.5 mm long.

The new epithet is formed from the Greek adjective *megistos*, larger; and the noun *calyx*, cup or calyx, and is given with reference to the large-sized calyx.